identifier value of data packet	destination port number
0	3
1	0
2	1
3	3
4	1
5	3
...	...

Figure 1

first routing table

data packet identifier value	port numberof the destination port
0	3
1	0
2	1
3	3
4	1
5	3
...	...

second routing table

port numberof the destination port	port numberof the transmitting port
0	0
1	1
2	2
3	3
4	4
5	5
...	...

Figure 2

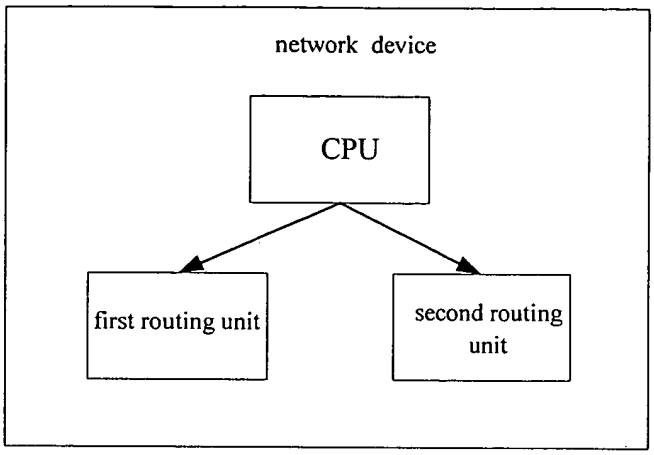

Figure 3

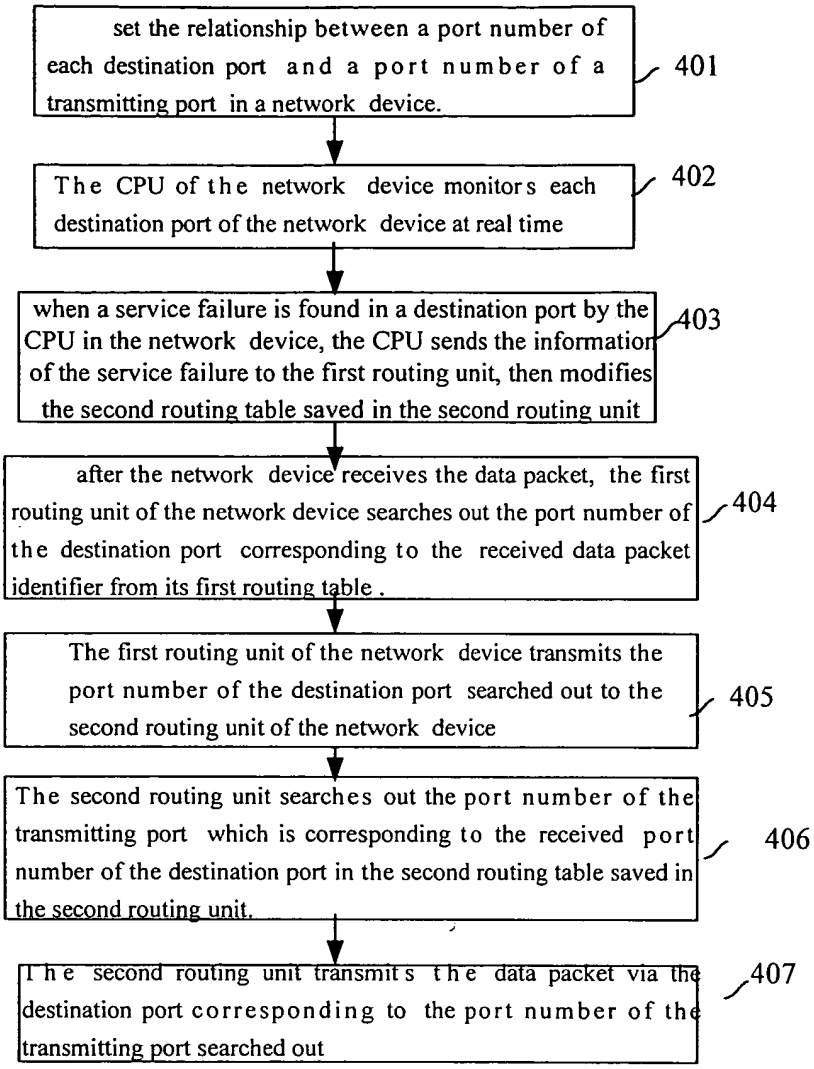
set the relationship between a port number of each destination port and a port number of a transmitting port in a network device.
401
The CPU of the network device monitors each destination port of the network device at real time
402
when a service failure is found in a destination port by the CPU in the network device, the CPU sends the information of the service failure to the first routing unit, then modifies the second routing table saved in the second routing unit
403
after the network device receives the data packet, the first routing unit of the network device searches out the port number of the destination port corresponding to the received data packet identifier from its first routing table .
404
The first routing unit of the network device transmits the port number of the destination port searched out to the second routing unit of the network device
405
The second routing unit searches out the port number of the transmitting port which is corresponding to the received port number of the destination port in the second routing table saved in the second routing unit.
406
The second routing unit transmits the data packet via the destination port corresponding to the port number of the transmitting port searched out
407

Figure 4

first routing table

data packet identifier value	port numberof the destination port
0	3
1	0
2	1
3	3
4	1
5	3
...	...

second routing table

port numberof the destination port	port numberof the transmitting port
0	0
1	3
2	2
3	3
4	4
5	5
...	...

Figure 5